

## KEMMANGUNDI REVISITED: NOTES ON BIRDS OBSERVED AT THE BABABUDAN HILLS, KARNATAKA, SOUTH INDIA<sup>1</sup>

S. THEJASWI<sup>2</sup>

<sup>1</sup>Accepted December 2002

<sup>2</sup>639, "Sibia House", 16th Cross, 'B' Block, Vijayanagar 3rd Stage, Mysore 570 017, Karnataka, India.  
Email: dumaketu@rediffmail.com

Kemmangundi, a popular hill station in the central Western Ghats, was visited for seven days in May 2002 to survey the birdlife in the surrounding *shola*-grassland mosaic. Several threatened species endemic to the Western Ghats, such as *Brachypteryx major*, *Schoenicola platyura* and *Columba elphinstonii* were among the 97 species of birds recorded. The significance of several observations lies in the fact that the birdlife of the central Western Ghats has not been thoroughly investigated except for a few studies conducted intermittently over the past seventy years, a fact that needs to be urgently addressed.

**Key words:** Western Ghats, Kemmangundi, *Brachypteryx major*, *Schoenicola platyura*

The present note is a discussion on birds observed by me at the Bababudan hills on a visit from May 21-27, 2002, and a comparison with birds noted and collected by Sálím Ali during his stay at Kemmangundi from January 19-24, 1940 (Ali 1942a-c, 1943a, b). Comparisons of resident birds recorded in the two surveys, with emphasis on Western Ghats endemics, reveal that a few species have retained or even improved their status since the 1940s, while a few others, especially grassland dependent species, have become rare. The avifauna of the central Western Ghats in Karnataka has not been well documented except in Kodagu (Coorg) (Betts 1929a, b; Betts 1951). Previous records of birds from Kemmangundi, like the White-bellied Shortwing *Brachypteryx major* and Nilgiri Flycatcher *Eumyias albicaudata* were the only records of the species north of Kodagu for long (Ali 1942b). Records of the Jerdon's Baza *Aviceda jerdoni*, Mountain Hawk-Eagle *Spizaetus nipalensis*, Ceylon Frogmouth *Batrachostomus moniliger*, Grass Owl *Tyto capensis*, Broad-tailed Grass-Warbler *Schoenicola platyura* from the Karnataka Western Ghats have been few. This paper clarifies the status of these birds in the Bababudan Hills.

The Bababudan Hills are a horse-shoe shaped range of high ridges located in the Chikmagalur district of Karnataka between 13° 23'-13° 35' N and 75° 37'-75° 52' E. The hills, an eastern off-shoot of the Western Ghats, run with a valley in the centre of the horse-shoe known as the Jagara valley (600 m) facing northwest; and have an average height of 1,400 m, reaching a maximum of 1,925 m (6,317 ft) at Mulaianagiri, the highest peak in Karnataka. The ridges are narrow and steep, with cascading cliffs on the outer end of the horse-shoe and interrupted by undulating hills on the inner side, covered by grassland on the slopes and luxuriant sholas, wet temperate montane evergreen forests, in the ravines between hills (Saldanha 1984).

Kemmangundi (13° 33' N, 75° 45' E) is a small, pleasant hill station established in 1932 by the Maharaja of Mysore, Krishnarajendra Wodeyar IV on the northeastern end of the hill range. At 1,434 m (4,702 ft), it is located by an abandoned open-cast iron mine. Kemmangundi in Kannada translates as 'red soil pit' (*Kemmannu* = red soil, *gundi* = pit), referring to the soil colour in the mining pit, as well as the surroundings. Mining for iron ore continues on a small scale on nearby hillsides. Large, dense sholas surround the place and these, along with a few neighbouring ones, are the more intact ones left on the range. Kemmangundi served as a base camp for Sálím Ali in 1940, when he visited the Bababudan hills while surveying the birds of the erstwhile princely Mysore State (Ali 1942a).

The Bhadra Tiger Reserve covers 451.7 sq. km of predominantly tropical moist mixed deciduous forest, with smaller areas under tropical dry deciduous, semi-evergreen forests mostly in the Jagara valley, montane wet temperate evergreen forests or sholas and montane grasslands in parts of the hill range. A few remnant patches of lowland evergreen forest occur on the southeastern fringes of the reserve in the Jagara valley.

### METHODS

Observations were made along selected paths through *sholas* and grasslands at Kemmangundi, the adjacent Bhadra Tiger Reserve and remnants of lowland evergreen forest in the Jagara valley. The paths were selected so as to cover both pure *shola* stretches and grassland, and the interface between the two. Monitoring of paths was done in the morning between 0600 and 0900 hrs and in the evenings between 1630 and 1830 hrs. Observations were conducted intermittently throughout the day from May 22-24, and for the whole day on May 21 and 25-27. Night transect was conducted twice for

nocturnal birds. Elevations between 800 m and 1,700 m were covered.

### OBSERVATIONS

A total of 97 species of birds were observed in seven days. Twelve of the sixteen species found only in the Western Ghats Endemic Bird Area were recorded (Jhunjhunwala *et al.* 2001). Significant sightings include those of the Jerdon's Baza *Aviceda jerdoni*, Mountain Hawk-Eagle *Spizaetus nipalensis*, Grass Owl *Tyto capensis*, Ceylon Frogmouth *Batrachostomus moniliger*, Blue-eared Kingfisher *Alcedo meninting*, Wynaad Laughingthrush *Garrulax delesserti*, Grey-breasted Laughingthrush *Garrulax jerdoni*, Broad-tailed Grass-Warbler *Schoenicola platyura*, all new records for the Bababudans and for the Bhadra Wildlife Sanctuary.

Confirmed breeding of the Nilgiri Wood-Pigeon *Columba elphinstonii*, Speckled Piculet *Picumnus innominatus*, Red-whiskered Bulbul *Pycnonotus jocosus*, Yellow-browed Bulbul *Iole indica*, Indian Scimitar-Babbler *Pomatorhinus horsfieldii*, Malabar Whistling-Thrush *Myiophonus horsfieldii*, Eurasian Blackbird *Turdus merula*, Nilgiri Flycatcher *Eumyias albicaudata*, White-bellied Blue-Flycatcher *Cyornis pallipes* and Brown Rock Pipit *Anthus similis* was observed.

An asterisk (\*) after the common name indicates a Western Ghats endemic. SA refers to Sálím Ali. Status of threatened and near threatened species follows BirdLife International (2001). Botanical identification and nomenclature follows Gamble (1956) and Saldanha (1984, 1996). The standard common and scientific names follow Manakadan and Pittie (2001)

#### Globally Threatened Species

**Indian White-backed Vulture (*Gyps benghalensis*):** Critical. Repeated sightings of single birds soaring near Kemmangundi. Not recorded by SA.

**Long-billed Vulture (*Gyps indicus*):** Critical. One sighting of ten birds, all adults, soaring with thermals on May 22 near Kemmangundi. Not recorded by SA.

**Nilgiri Wood-Pigeon\* (*Columba elphinstonii*):** Vulnerable. Common in *sholas* and partial to *Syzigium wightianum* and *S. operculatum* trees that were fruiting in abundance everywhere (see Appendix 1). Individuals were observed indulging in acrobatics like Green-Pigeons to get to the drupes of their choice, usually the ripest one in the bunch, several seen in action – clinging upside down on branches and balancing with outspread wings and tail. Very vocal; one of the commonly uttered calls was a fast 'ku-kuu', immediately ending in an abrupt 'ku'. Variations of the same, with varying

numbers of the first note also heard occasionally. Another call noted was a deep 'wah-kwoo-woo'. These were in addition to the usual langur-like deep 'who's'. The bird was observed and collected by SA at Kemmangundi and noted to be "fairly common" (Ali 1943a).

A nest was observed on May 23 in a shallow fork on a thickly foliated *Apodytes dimidiata* tree c. 8 m from the ground, along a stream in the Shankara *shola*. The nest was a clumsy platform of twigs and had a single white egg under incubation.

**White-bellied Shortwing\* (*Brachypteryx major*):** Vulnerable. The race *major* is resident, fairly frequent only in *sholas* above c. 1,300 m. Observed after a period of sixty years at Kemmangundi. Observers after Ali (1942b), if any, probably missed it due to its retiring habits, or because they did not spend enough time looking for it. Easily seen in twilight, with the aid of a torch or jeep headlights, along roads when they come out of the *sholas* to feed. In flight noisy for its size, perhaps because of its small wings and fairly rapid wing beat. Easily seen in ravines, in leaf litter under thickets along streams, and near bridges over streams in the *sholas*. It can also be observed at the Kudremukh National Park, Kumaraparvata Peak in the Pushpagiri Wildlife Sanctuary, Brahmagiri hills under the Brahmagiri Wildlife Sanctuary, both in Kodagu district; and the Kodachadri Peak in the Mookambika Wildlife Sanctuary across Udupi and Shimoga districts, which is perhaps the northern limit for the species (*pers. obs.*). Specimens collected by SA from Kemmangundi (Ali 1942b) and noted as "Frequent, but not common in accustomed facies." Birds can be seen even in the most isolated, small patches of *shola*, one of which was hardly 3-4.5 m at c. 1,600 m!

**Broad-tailed Grass-Warbler\* (*Schoenicola platyura*):** A new record for the Bababudans and a significant one for a Vulnerable species (BirdLife International 2001). Encountered thrice in the span of a week, twice above Kemmangundi on May 23 and 24 in *Chrysopogon-Andropogon* grassland and *Strobilanthes* thickets and once at Mulaianagiri on May 26 in grassland. The bird observed at Kemmangundi early (0630 hrs) on May 24 was calling out loud from the top of a grass clump, with its head facing the sky, a sweet 'pseit' continuously seven to eight times, ending in 'chrr', 'chut' or loud 'chit'. The other birds were seen when accidentally flushed and then followed in the grassland for quite a distance; a difficult species to observe due to its skulking habits. Not noted by SA.

#### Globally Near-Threatened Species

**Malabar Pied Hornbill (*Anthracoceros coronatus*):** One sighting of a flock of five on May 27, at the foothills



c. 700 m, feeding on a large fruiting *Ficus arnottiana* tree in a coffee plantation. This species, along with the next, are probably rare in the Bhadra Tiger Reserve and declining throughout its range. Not recorded by SA.

**Great Pied Hornbill (*Buceros bicornis*):** One spectacular and memorable sighting of seven birds swooping down the Hebbe waterfalls (9 km from Kemmangundi) in succession, plummeting from c. 121 m (400 ft) to a large fruiting *Ficus beddomei* in tall evergreen riparian forest on May 24. Not recorded by SA.

**Grey-breasted Laughingthrush\* (*Garrulax jerdoni*):** A new record for the Bababudans and for the central Karnataka Western Ghats. This record bridges the distribution gap between Goa (Rane 1984) and Coorg (Ali and Ripley 1987). Uncommon in three *sholas*, all large and contiguous with each other, status elsewhere unknown; found only above 1,100 m. Bands of up to eight birds noted frequenting clumps of fruiting *Rubus fockei*; one flock of four seen on May 24 at 900 m on the roadside beside a coffee estate, feeding on fruits of the Mulberry, *Morus alba*. I have also observed the species at the Kudremukh National Park in early March 2002.

**Nilgiri Flycatcher\* (*Enmyias albicaudata*):** Fairly common resident in *sholas* above 1,300 m. Breeding noted at Kemmangundi, four nests with nearly fledged chicks and one with three eggs under incubation were observed in the Shanti waterfalls *shola*. Nests were of moss, all placed in tree fissures or cavities 3-6 m from the ground. Fledged chicks that have left the nest were observed, some still being fed by the parents. Song given by Kazmierczak (2000) as “chee-chew chewy chi-chwee chwee choo chi-choo chee” is slightly different for all birds heard in the Bababudans; the song here was almost identical in the first seven notes but was longer and had a few extra notes in the end “chee-chew chewy chi-chwee chwee-chee, chwee chi-choe choe chee choe-chee” and a refrain, “chee-chew chewy chwee-chi chwee-chi” that was repeated two to three times after the initial song, with a couple of ‘chee’s one way or another. A threatened bird in these hills with a very limited range in *shola* forest above 1,300 m. A few large *sholas* around Kemmangundi and in the Bhadra Tiger Reserve are the only strongholds left relatively intact. It was not seen in plantations, whereas it is commonly seen in plantations in the Nilgiris (Ashfaq Ahmed Zarri, *pers. comm.*). Collected and noted by SA at Kemmangundi (Ali 1942b).

#### Notes on Selected Species

**Jerdon’s Baza (*Aviceda jerdoni*):** Four birds were observed on May 24, in a large *shola* located in the Bhadra Tiger Reserve, beside a stream at c. 1,000 m and 4 km from Kemmangundi on the road to Chikmagalur. The birds, all

adults, were readily identified by their gregarious habit; a thin, white-tipped, clear upright crest; rufous head streaked black, more so on the nape; a clear, thin black mesial stripe; underparts clearly and broadly barred rufous; tail barred black with terminal white tip. In flight, it was observed to be different from the Crested Goshawk (*Accipiter trivirgatus*), which has incidentally also been recorded, in having distinct black tips to the primaries, which the Goshawk lacks. The Mountain Hawk-Eagle (*Spizaetus nipalensis*), another bird with which the Baza could be confused is much larger and with a crest not pointing upwards in normal situations. Also, the underwing coverts are uniformly rufous-buff in flight, whereas in the Baza it is thinly barred rufous. The birds were located on successive days, May 25 and 26, in the same *shola*, but a few hundred metres downstream of the earlier sighting. One bird was observed consuming a small, dark rufous-brown squirrel. No calls heard.

The Jerdon’s Baza is a rare resident in southwest India, although more common in parts of northeast India, preferring foothills with evergreen forest between c. 12° N in western Karnataka, and Kerala (Ali and Ripley 1987). There are very few actual records of the bird from the Western Ghats, with Kazmierczak (2000) able to trace only four from the Western Ghats, and one from Karnataka. Recent records of the bird have mostly been from Kerala. This record, after a long time in Karnataka, is significant, as extensive tracts of ecologically suitable evergreen forest in the Western Ghats of Karnataka remain under-surveyed, or even unsurveyed, for birds. The bird could thus be expected to occur in evergreen forests of the Shiradi, Charmadi and Agumbe Ghats of Dakshina Kannada, Hassan, Shimoga districts; and in the Uttara Kannada district. Not recorded by SA in his Mysore survey.

**Short-toed Snake-Eagle (*Circaetus gallicus*):** A single sighting of a soaring adult on May 22 above Kemmangundi c. 1,500 m. The “cumbrous and ungainly hovering” against winds (Ali 1996) of 60-70 kmph, was noted over grassland close to the ‘Z-point’, the extreme eastern end of the hill range and about 1.5 km from Kemmangundi. The bird is uncommon at this altitude in south India and probably rose with thermals. Not recorded by SA.

**Crested Goshawk (*Accipiter trivirgatus*):** One bird observed from above, gliding over the Shankara *shola* at Kemmangundi on May 21 and alighting on a *Schefflera rostrata* tree. Not recorded by SA.

**Rufous-bellied Eagle (*Hieraaetus kienerii*):** One bird seen perched at a ‘vantage point’, on a fruiting *Syzgium operculatum* tree overlooking the large Shankara *shola*, everyday between May 21 and 24. Not recorded by SA but noted by one observer earlier (Shyamal 1993).

**Mountain Hawk-Eagle (*Spizaetus nipalensis*):** Rare resident? One bird seen in flight over the Shankara *shola* on May 22 and 23. It was first seen alighting on a *Eucalyptus* tree close to the tourist complex at Kemmangundi. Not noted by SA.

**Mountain Imperial-Pigeon (*Ducula badia*):** A single flock of six birds feeding on *Ficus glomerata* figs near the Potato Research Station of the Horticulture Department at Kemmangundi on May 22. Not noted by SA.

**Grass Owl (*Tyto capensis*):** Another first record for the Bababudans, and a northern extension of the bird's range in the Western Ghats; being previously known up to the Brahmagiris in Kodagu (Coorg) (Ali and Ripley 1987). Two birds flushed from a depression in tall, dry *Chrysopogon* grassland bordered by *Strobilanthes* clumps on May 24 in the Bhadra Tiger Reserve. The birds soon settled a couple of hundred metres away in the grassland and were wary of approach, either running away or flying a short distance before settling in the grass.

I have also observed a lone bird at night (2030 hrs) near the Kerekatte forest rest house in the Kudremukh National Park in early March 2002, feeding on a rodent.

**Brown Wood-Owl (*Strix leptogrammica*):** One freshly dead bird was found at Kemmangundi on May 24. Measurements: Wing 325 mm, Bill (from skull) 45 mm, Tarsus 56 mm, Tail 195 mm. Plumage appeared much worn with no signs of moult either in wing or tail. Cause of death not apparent, probably natural. Also heard twice during night transect through Shankara *shola*. Not noted by SA.

**Ceylon Frogmouth (*Batrachostomus uouiliger*):** A first record from the Bhadra Tiger Reserve on the Bababudans, and a significant one as it is from the intervening country between the northern recorded limits — Radhanagari Wildlife Sanctuary in Kolhapur district of Maharashtra (Giri 2001), Uttara Kannada district (North Kanara) in Karnataka (Borges 1986, Daniels 1984) and southern limits in Tamil Nadu - Kerala (Ali and Ripley 1987; Gaston and Zacharias 1996; Kannan 1993; Sugathan 1981). Three birds, two males and a female, were noted roosting 5 m from the ground, on bamboo thickets by a stream in thick *shola* on May 25. They were encountered by chance when following a Grey-headed Bulbul, *Pycnonotus priocephalus* through the bamboo. The birds were inactive, but became alert when the bamboo was accidentally disturbed on close approach. They were noted in the same spot again on May 26 and 27.

**Blue-eared Kingfisher (*Alcedo meninting*):** Two sightings of single birds of this uncommon species; one by a stream in the Shankara *shola* at c. 1,000 m and the other by a large pool of water at the foot of the 137 m (450 feet) high Hebbe falls located in the midst of evergreen forest and a coffee estate. Not noted by SA.

**Great Black Woodpecker (*Dryocopus javensis*):** Uncommon. A single sighting of an individual drumming away high on a tall *Dipterocarpus* tree in riparian evergreen forest on May 24. A female collected by SA from the Jagara Valley (Ali 1942c). This species is common in the mature moist deciduous forests of the Bhadra Tiger Reserve, which is a haven for woodpeckers.

**Indian Pitta (*Pitta brachyura*):** Status equivocal. A single sighting of a bird calling on a tree c. 10 m above ground, persisting for around twenty minutes at 0630 hrs on May 23 near the guest house at Kemmangundi. Calls heard repeatedly after this sighting. Baker and Inglis (1930) on the breeding season of the Pitta state, "It is said to breed during the rains in Kanara, but I have not had the good fortune to find a nest."

**Malabar Crested Lark (*Galerida malabarica*):** Rare. Two sightings on hill summits, one at Kemmangundi of four birds (c. 1,500 m) and the other at Mulaianagiri (c. 1,900 m) of a single bird. Ali (1942c) notes "Fairly common. Met with small parties and loose scattered flocks of up to 30 birds or so, on grass-covered hill slopes with outcrops of sheet rock." A male was collected by SA at above Kemmangundi (Ali 1942c). This bird was not seen, despite a lookout for it on the Kemmangundi-Chikmagalur road that runs 40 km, covering a major portion of the range at the tops; but it could be more common than apparent and has certainly seen a decline over the years.

**Grey-headed Bulbul\* (*Pycnonotus priocephalus*):** Uncommon, possibly overlooked. A denizen of the deepest *sholas*, with a preference for stream-side vegetation, also bamboo in lower elevations. This species has been noted from riverine vegetation in the moist deciduous forests at Muthodi in the Bhadra Tiger Reserve but rare at that location (S. Karthikeyan *pers. comm.*, *Author's pers. obs.*). Noted by SA in the Jagara Valley (Ali 1942b).

**Black-crested Bulbul (*Pycnonotus melanicterus gularis*):** Uncommon in *shola* edges and disturbed areas, thickets of *Rubus fockei*, while *Lantana* is a favourite in lower elevations and coffee plantations, often in mixed flocks. Not recorded by SA.

**Scaly Thrush (*Zoothera dauma*):** Rare, perhaps overlooked, resident, heard more often than seen. Three sightings at Kemmangundi, deep in the Shankara *shola*. Calls heard sometimes close to road, also heard in neighbouring *sholas*. Not recorded by SA and a new record for the Bababudans. Also occurs in the Kudremukh National Park (*pers. obs.*).

**Wynaad Laughingthrush\* (*Garrulax delesserti*):** Recorded only once on May 25 in the same *shola* as the Jerdon's Baza, a flock of around eight birds keeping to the thick undercover in a mixed party of Indian Scimitar, Indian Rufous and Black-headed Babblers, Grey-headed Flycatcher,



Black-crested Bulbul, Large Wood-Shrike and Greater Golden-backed Woodpecker. Loud, discordant cackling in unison, on alarm. Not recorded by SA and a first record for the Bababudans where populations are probably small and isolated due to degradation of intervening habitats. Occurs in and around the Kudremukh National Park (*pers. obs.*; Ahmed and Bhat 2001a, b), Agumbe (Ali 1942b), around Jog Falls, Charmadi Ghat, Sampaje Ghat, Kumarapavata mountain in the Pushpagiri Wildlife Sanctuary, Brahmagiri Wildlife Sanctuary and adjoining reserve forests and Kemphole State Forest on the Shiradi Ghat where it is particularly common.

**Rufous-bellied Babbler (*Dumetia hyperythra*):** Resident at Kemmangundi, restricted to gardens near the guest houses, the horticulture department rock garden, disturbed areas of thickets and undergrowth bordering plantations; never in *sholas* where it is replaced by the Black-headed Babbler, *Rhopocichla atriceps* (*pers. obs.*; Ali 1942b).

**Indian Rufous Babbler\* (*Turdoides subrufus*):** Resident, not common but frequent in undergrowth of *Cinnamomeum*, also disturbed areas bordering *sholas*; often in small parties of three to four birds, very shy. Not noted by SA.

**Golden-headed Fantail-Warbler (*Cisticola exilis*):** Rare resident on grassy hilltops above Kemmangundi, at Mulaianagiri and Bababudanagiri. A few birds also observed in *Strobilanthes* thickets between *sholas* and grassland. Collected by SA from various points in grasslands and noted as common for the entire hill range (Ali 1942c).

**White-bellied Blue-Flycatcher\* (*Cyornis pallipes*):** Common resident in *sholas*, thick evergreen forest and riverine bamboo forest from c. 800 m to the highest elevations, but generally less common above 1,400 m. Nest building in progress in a tree fissure c. 2 m from the ground in the Shankara *shola*, beside a road. Female was observed to contribute most to nest building, collecting moss from nearby branches of trees, as well as arranging the material in cup form. Otherwise seen singly in *sholas*, even disturbed areas bordering *sholas*, hawking insects from telegraph wires; also coffee estates bordering *sholas*. The male sings a sweet early morning song, on awakening: “*chi-chi-chi-chi-chi-chwai-chwai-chwai*”, ending on a somewhat questioning note. SA collected the bird from Kemmangundi and noted it as “fairly common” (Ali 1942b).

**Black-throated Munia (*Louchura kelaarti*):** Common resident on the lower slopes, in disturbed areas and about cultivation. Once a flock of ten at the Potato Research Station of the Horticulture Department at Kemmangundi. Also common in the lower reaches of the Bhadra Wildlife Sanctuary. A range extension for the species, not previously documented from areas north of Kodagu district (Ali and Ripley 1987), but is now known to be common but patchy all along the Western Ghats in Karnataka; in Dakshina Kannada, Uttara Kannada,

Hassan, Chikmagalur, Udupi, Shimoga and Belgaum districts (*pers. obs.*; S. Karthikeyan *pers. comm.*; J.N. Prasad *pers. comm.*; Anand Prasad *pers. comm.*). Not noted by SA.

**White-bellied Tree-pie\* (*Dendrocitta leucogastra*):** Resident, common in mixed parties in *sholas*, tall evergreen forests on lower slopes and coffee plantations with good tree cover, bordering *sholas*. Noted by SA on the Bababudans (Ali 1942a).

## DISCUSSION

Sálim Ali recorded sixty-nine species of birds, including thirteen winter visitors, at the Bababudan hills in January 1940. In this survey, in May 2002, ninety-seven species of birds were observed, not including winter visitors. Forty-three species were added to the bird list of Ali (1942-43) and Shyamal (1993) {see Appendix 2}.

### Threats to Endemic Bird Habitats

**Sholas:** *Sholas* have been denuded to a great extent in these hills, being replaced by coffee and eucalyptus plantations. The extant area under relatively intact *shola* cover lies within the Bhadra Tiger Reserve, towards the western end of the ridge. Iron mining is a threat in certain areas, with loose soil being exposed by the open cast method; erosion and landslides become inevitable during the monsoon. These *sholas* are the birthplace of the river Vedavati, one of the tributaries of the Krishna.

*Shola* specific species like the White-bellied Shortwing and Nilgiri Flycatcher will face the impact of the denudation of *sholas* (Maheshwaran 2001).

**Grasslands:** Grasslands are also imperiled, being targeted by the Forest Department for *Eucalyptus* and *Aloe* plantation programmes under the wasteland development and afforestation schemes of the Karnataka government. Mining is a greater threat to grasslands than to *sholas*, as it is primarily the hilltops that are dug out for ore. Deep fissures on the hillside being mined reveal the importance of grass cover in holding the soil together. Grasslands in the Bhadra Tiger Reserve are particularly in danger of being planted over. Rahmani (1992) points out that grasslands are insufficiently represented in the protected areas of the Indian subcontinent, and this needs to be urgently addressed.

Species like the Grass Owl, Malabar Crested Lark, Brown Rock Pipit, Gold-headed Fantail-Warbler and Broad-tailed Grass-Warbler found only in grasslands will be severely affected (Maheshwaran 2001).

A detailed survey of the avifauna of the central Western Ghats in Karnataka has to be taken up at the earliest to update our knowledge of the birds of the Western Ghats as there

ACKNOWLEDGEMENTS

I would like to thank my father for his support of my work; S. Karthikeyan, J.N. Prasad, L. Shyamal and Anand Prasad for distribution data; Dr. S. Subramanya, A. Shivaprakash, S. Karthikeyan and Ashfaq Ahmed Zarri for their critical comments on earlier drafts and my brother Yashaswi for company in the field.

REFERENCES

ALI, S. (1942a): The Birds of Mysore (with notes by Hugh Whistler). Part I. *J. Bombay Nat. Hist. Soc.* 43(2): 130-147.

ALI, S. (1942b): The Birds of Mysore (with notes by Hugh Whistler). Part II. *J. Bombay Nat. Hist. Soc.* 43(3): 318-341.

ALI, S. (1942c): The Birds of Mysore (with notes by Hugh Whistler). Part III. *J. Bombay Nat. Hist. Soc.* 43(4): 573-595.

ALI, S. (1943a): The Birds of Mysore (with notes by Hugh Whistler). Part IV. *J. Bombay Nat. Hist. Soc.* 44(1): 9-26.

ALI, S. (1943b): The Birds of Mysore (with notes by Hugh Whistler). Part V. *J. Bombay Nat. Hist. Soc.* 44(2): 206-220.

ALI, S. (1996): The Book of Indian Birds. 12th Edition. Bombay Natural History Society, Bombay.

ALI, S. & S.D. RIPLEY (1987): Compact Handbook of the Birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka. 2nd Edition. Oxford University Press, Delhi.

BAKER, H.R. & C.M. INGLIS (1930): The Birds of southern India including Madras, Malabar, Travancore, Cochin, Coorg and Mysore. Government Press, Madras.

BETTS, F.N. (1929a): Notes on the Birds of Coorg. *J. Bombay Nat. Hist. Soc.* 33(3): 542-551.

BETTS, F.N. (1929b): Bird movements in Coorg. *J. Bombay Nat. Hist. Soc.* 33(3): 718-719.

BETTS, F.N. (1951): The Birds of Coorg. Part I. *J. Bombay Nat. Hist. Soc.* 50(1): 20-63.

BIRDLIFE INTERNATIONAL (2001): Threatened Birds of Asia: the BirdLife International Red Data Book. BirdLife International. Cambridge, UK. Pp. 588-613, 614-620, 1524-1530, 2019-2022, 2195-2198.

BORGES, R. (1986): On the occurrence of the Ceylon Frogmouth (*Batrachostomus moniliger*) in north Kanara, Karnataka. *J. Bombay Nat. Hist. Soc.* 83(1): 200.

CHAKRAVARTHY, A.K. & K.P.C.C. TEJASVI (1992): Birds of the hill region of Karnataka: an introduction. Navbharath Enterprises, Bangalore.

DANIELS, R.R.J. (1984): The Ceylon Frogmouth *Batrachostomus moniliger*. *Newsletter for Birdwatchers* 24(1-2): 21.

DANIELS, R.R.J. (1997): Field Guide to the birds of southwest India. Oxford University Press, New Delhi.

GAMBLE, J.S. (1956): Flora of the Presidency of Madras. Botanical Survey of India, Calcutta. Reprint in three volumes.

GASTON, A.J. & V.J. ZACHARIAS (1996): The recent distribution of endemic and disjunct birds in Kerala state: preliminary results of an ongoing survey. *J. Bombay Nat. Hist. Soc.* 93(3): 384-400.

GIRI, V.B. (2001): Occurrence of the Ceylon Frogmouth *Batrachostomus moniliger* (Family Podargidae) in Radhanagari Wildlife Sanctuary, Maharashtra. *J. Bombay Nat. Hist. Soc.* 99(1): 116-117.

JHUNJHUNWALA, S., A.R. RAHMANI, F. ISHTIAQ & Z. ISLAM (2001): The Important Bird Areas Programme in India. *Buceros* 6(2), 50 pp.

KANNAN, R. (1993): Recent sightings of the Ceylon Frogmouth in India. *OBC Bulletin* 17(May): 36-38.

KAZMIERCZAK, K. (2000): A Field Guide to the Birds of the India, Sri Lanka, Pakistan, Nepal, Bhutan, Bangladesh and the Maldives. Om Book Service, New Delhi.

MAHESHWARAN, G. (2001): Effects of habitat alteration on the birds of the Western Ghats. *OBC Bulletin* 33: 13-14.

MANAKADAN, R. & A. PITTIE (2001): Standardised common and scientific names of the birds of the Indian Subcontinent. *Buceros* 6(1): ix + 38.

RAHMANI, A.R. (1992): Threatened fauna of the Indian grasslands. Pp. 143-150. In: Tropical Ecosystems: Ecology and Management (Eds: Singh, K.P. & J.S. Singh). Wiley Eastern, New Delhi.

RANE, U. (1984): Occurrence of White-breasted Laughingthrush (*Garrulax jerdoni* Blyth) in Goa. *J. Bombay Nat. Hist. Soc.* 81(2): 474-475.

SALDANHA, C.J. (1984): Flora of Karnataka. Vol. 1. Oxford & IBH publishing Co, New Delhi.

SALDANHA, C.J. (1996): Flora of Karnataka. Vol. 2. Oxford & IBH publishing Co, New Delhi.

SHYAMAL, L. (1993): Rufous-bellied Hawk-Eagle at Kemmangundi. *Newsletter for Birdwatchers* 33(5): 94.

SUGATHAN, R. (1981): A survey of the Ceylon Frogmouth (*Batrachostomus moniliger*) habitat in the Western Ghats of India. *J. Bombay Nat. Hist. Soc.* 78(2): 309-316.

Appendix 1: Numbers of globally threatened and near-threatened species observed at Kemmangundi

Species	Date	21.v.2002	22.v.2002	23.v.2002	24.v.2002	25.v.2002	26.v.2002	27.v.2002
<i>Gyps benghalensis</i> *		1	1	-	1	-	-	1
<i>Gyps indicus</i> *		-	10	-	-	-	-	-
<i>Brachypteryx major</i> *		6	4	3	12	3	5	3
<i>Columba elphinstonii</i> *		6	8	9	15	6	7	27
<i>Schoenicola platyura</i> *		-	-	1	1	-	1	-
<i>Anthraceros coronatus</i> #		-	-	-	-	-	-	5
<i>Buceros bicornis</i> #		-	-	-	7	-	-	-
<i>Garrulax jerdoni</i> #		8	8	-	4	7	8	-
<i>Eumyias albicaudata</i> #		8	7	5	18	10	5	4

\* Globally threatened species, # Globally near-threatened species

NOTES ON BIRDS OBSERVED AT THE BABABUDAN HILLS

Appendix 2: A checklist of birds of Kemmangundi <sup>α, β</sup>

Species	Sálim Ali	Shyamal	Thejaswi	Status
<i>Aviceda jerdoni</i> , Jerdon's Baza			*	R
<i>Pernis ptilorhynchus</i> , Oriental Honey Buzzard		*	*	C
<i>Milvus migrans</i> , Black Kite			*	?
<i>Gyps benghalensis</i> , Indian White-backed Vulture			*	R
<i>Gyps indicus</i> , Long-billed Vulture			*	R
<i>Circaetus gallicus</i> , Short-toed Snake-Eagle			*	R
<i>Spilornis cheela</i> , Crested Serpent Eagle	*			?
<i>Accipiter trivirgatus</i> , Crested Goshawk			*	UC
<i>Accipiter virgatus</i> , Besra Sparrowhawk			*	C
<i>Ictinaetus malayensis</i> , Black Eagle		*	*	C
<i>Hieraaetus kienerii</i> , Rufous-bellied Eagle		*	*	C
<i>Spizaetus cirrhatus</i> , Changeable Hawk-Eagle#			*	-
<i>Spizaetus nipalensis</i> , Mountain Hawk-Eagle			*	R
<i>Falco tinnunculus</i> , Common Kestrel		*	*	C
<i>Falco peregrinus</i> , Peregrine Falcon	*		*	C
<i>Pedicularia erythrorhyncha</i> , Painted Bush-Quail	*		*	C
<i>Galloperdix spadicea</i> , Red Spurfowl	*		*	C
<i>Gallus sonneratii</i> , Grey Junglefowl	*	*	*	A/C
<i>Columba elphinstonii</i> , Nilgiri Wood-Pigeon	*		*	C/B
<i>Chalcophaps indica</i> , Emerald Dove			*	UC
<i>Treron pompadora</i> , Pompadour Green-Pigeon			*	R
<i>Ducula badia</i> , Mountain Imperial-Pigeon			*	R
<i>Loriculus badia</i> , Indian Hanging-Parrot	*	*	*	C
<i>Psittacula cyanocephala</i> , Plum-headed Parakeet	*			?
<i>Psittacula columboides</i> , Blue-winged Parakeet	*	*	*	C
<i>Hierococcyx varius</i> , Brainfever Bird	*			?
<i>Cacomantis sonneratii</i> , Banded Bay Cuckoo			*	R
<i>Tyto capensis</i> , Grass Owl			*	R
<i>Otus sunia</i> , Oriental Scops-Owl			*	C
<i>Strix leptogrammica</i> , Brown Wood-Owl			*	UC
<i>Batrachostomus moniliger</i> , Ceylon Frogmouth			*	R
<i>Caprimulgus atripennis</i> , Jerdon's Nightjar			*	UC
<i>Collocalia unicolor</i> , Indian Edible-nest Swiftlet			*	?
<i>Tachymarpis melba</i> , Alpine Swift			*	C
<i>Harpactes fasciatus</i> , Malabar Trogon			*	UC
<i>Alcedo meninting</i> , Blue-eared Kingfisher			*	R
<i>Nyctyornis athertoni</i> , Blue-bearded Bee-eater			*	UC
<i>Merops orientalis</i> , Small Bee-eater		*		?
<i>Merops leschenaulti</i> , Chestnut-headed Bee-eater	*		*	C
<i>Ocyroceros griseus</i> , Malabar Grey Hornbill	*			?
<i>Anthracosceros coronatus</i> , Malabar Pied Hornbill#			*	-
<i>Buceros bicornis</i> , Great Pied Hornbill			*	R
<i>Megalaima zeylanica</i> , Brown-headed Barbet			*	C
<i>Megalaima viridis</i> , White-cheeked Barbet	*	*	*	C
<i>Megalaima rubricapilla</i> , Crimson-throated Barbet	*		*	UC
<i>Picumnus innominatus</i> , Speckled Piculet	*		*	C/B
<i>Dryocopus javensis</i> , Great Black Woodpecker	*		*	UC
<i>Dinopium javanense</i> , Common Golden-backed Woodpecker	*		*	C
<i>Chrysocolaptes lucidus</i> , Greater Golden-backed Woodpecker			*	C
<i>Hemicircus canente</i> , Heart-spotted Woodpecker	*		*	UC
<i>Pitta brachyura</i> , Indian Pitta			*	?
<i>Galerida malabarica</i> , Malabar Crested Lark	*		*	UC

## NOTES ON BIRDS OBSERVED AT THE BABABUDAN HILLS

 Appendix 2: A checklist of birds of Kemmangundi <sup>α, β</sup> (contd.)

Species	Sálim Ali	Shyamal	Thejaswi	Status
<i>Hirundo rupestris</i> , Eurasian Crag-Martin	*			?/W
<i>Hirundo concolor</i> , Dusky Crag-Martin	*		*	C
<i>Hirundo rustica</i> , Common Swallow		*		?/W
<i>Hirundo daurica</i> , Red-rumped Swallow	*	*		UC
<i>Dendronanthus indicus</i> , Forest Wagtail	*			?/W
<i>Anthus rufulus</i> , Paddyfield Pipit	*			?
<i>Anthus similis</i> , Brown Rock Pipit	*	*	*	C/B
<i>Anthus hodgsoni</i> , Oriental Tree Pipit	*	*		C/W
<i>Coracina melanoptera</i> , Black-headed Cuckoo-Shrike	*			?
<i>Pericrocotus flammeus</i> , Scarlet Minivet	*		*	R
<i>Hemipus picatus</i> , Pied Flycatcher-Shrike	*		*	C
<i>Tephrodornis gularis</i> , Large Woodshrike	*		*	C
<i>Pycnonotus priocephalus</i> , Grey-headed Bulbul			*	UC
<i>Pycnonotus melanicterus</i> , Black-crested Bulbul			*	C
<i>Pycnonotus jocosus</i> , Red-whiskered Bulbul	*	*	*	A/B
<i>Iole indica</i> , Yellow-browed Bulbul	*		*	C/B
<i>Hypsipetes leucocephalus</i> , Black Bulbul	*	*	*	C
<i>Chloropsis aurifrons</i> , Gold-fronted Chloropsis			*	UC
<i>Irena puella</i> , Asian Fairy-Bulebird			*	C
<i>Lanius cristatus</i> , Brown Shrike		*		?/W
<i>Monticola cinclorhynchus</i> , Blue-headed Rock-Thrush	*	*		C/W
<i>Monticola solitarius</i> , Blue Rock-Thrush	*			?/W
<i>Myiophonus horsfieldii</i> , Malabar Whistling-Thrush	*		*	C/B
<i>Zoothera citrina</i> , Orange-headed Thrush			*	C/POB
<i>Zoothera dauma</i> , Scaly Thrush			*	R
<i>Turdus merula</i> , Eurasian Blackbird	*		*	C/B
<i>Brachypteryx major</i> , White-bellied Shortwing	*		*	C
<i>Luscinia brunnea</i> , Indian Blue Robin	*			C/W
<i>Copsychus saularis</i> , Oriental Magpie-Robin	*	*	*	C
<i>Copsychus malabaricus</i> , White-rumped Shama			*	R
<i>Saxicola torquata</i> , Common Stonechat	*			?/W
<i>Saxicola caprata</i> , Pied Bushchat	*	*	*	C/B
<i>Garrulax delesserti</i> , Wynaad Laughingthrush			*	R
<i>Garrulax jerdoni</i> , Grey-breasted Laughingthrush			*	R/UC
<i>Pellorneum ruficeps</i> , Spotted Babbler	*	*	*	C
<i>Pomatorhinus horsfieldii</i> , Indian Scimitar-Babbler	*	*	*	C/B
<i>Dumetia hyperythra</i> , Rufous-bellied Babbler	*		*	UC
<i>Rhopocichla atriceps</i> , Black-headed Babbler	*		*	C
<i>Turdoides subrufus</i> , Indian Rufous Babbler		*	*	C
<i>Turdoides striatus</i> , Jungle Babbler#	*		*	C
<i>Alcippe poioicephala</i> , Quaker Tit-Babbler	*		*	C
<i>Cisticola exilis</i> , Golden-headed Fantail-Warbler	*		*	UC/R
<i>Locustella naevia</i> , Pale Grasshopper-Warbler	*			C/W
<i>Acrocephalus dumetorum</i> , Blyth's Reed Warbler		*		C/W
<i>Phylloscopus affinis</i> , Tickell's Warbler	*			C/W
<i>Phylloscopus occipitalis</i> , Western Crowned Warbler	*			C/W
<i>Schoenicola platyura</i> , Broad-tailed Grass-Warbler			*	R
<i>Muscicapa dauurica</i> , Asian Brown Flycatcher	*			?
<i>Ficedula parva</i> , Red-throated Flycatcher	*	*		C/W
<i>Eumyias thalassina</i> , Verditer Flycatcher		*		C/W
<i>Eumyias albicaudata</i> , Nilgiri Flycatcher	*		*	C/B



NOTES ON BIRDS OBSERVED AT THE BABABUDAN HILLS

Appendix 2: A checklist of birds of Kemmangundi <sup>α, β</sup> (contd.)

Species	Sálím Ali	Shyamal	Thejaswi	Status
<i>Cyornis pallipes</i> , White-bellied Blue-Flycatcher	*		*	C/B
<i>Cyornis rubeculoides</i> , Blue-throated Flycatcher	*			C/W
<i>Cyornis tickelliae</i> , Tickell's Blue-Flycatcher (?) §		*		?
<i>Culicicapa ceylonensis</i> , Grey-headed Flycatcher			*	C/PRB
<i>Parus xanthogenys</i> , Black-lored Yellow-Tit	*		*	C
<i>Sitta frontalis</i> , Velvet-fronted Nuthatch	*		*	C/B
<i>Dicaeum agile</i> , Thick-billed Flowerpecker			*	R
<i>Dicaeum concolor</i> , Plain Flowerpecker			*	R
<i>Nectarinia minima</i> , Small Sunbird	*	*	*	C
<i>Arachnothera longirostra</i> , Little Spiderhunter			*	UC
<i>Zosterops palpebrosus</i> , Oriental White-eye	*	*	*	A
<i>Carpodacus erythrinus</i> , Common Rosefinch	*			C/W
<i>Lonchura kelaarti</i> , Black-throated Munia			*	R
<i>Sturnus malabaricus</i> , Grey-headed Starling	*		*	C
<i>Acridotheres fuscus</i> , Jungle Myna			*	R
<i>Gracula indica</i> , Southern Hill-Myna			*	C
<i>Oriolus oriolus</i> , Eurasian Golden Oriole		*	*	?
<i>Dicrurus leucophaeus</i> , Ashy Drongo	*	*		C/W
<i>Dicrurus aeneus</i> , Bronzed Drongo	*		*	UC
<i>Dicrurus paradiseus</i> , Greater Racket-tailed Drongo	*		*	C
<i>Dendrocitta leucogastra</i> , White-bellied Treepie	*		*	C
<i>Corvus macrorhynchos</i> , Jungle Crow		*	*	R

<sup>α</sup> - The list is by no means complete and stands at 125 species

<sup>β</sup> - Nomenclature follows Manakadan and Pittie (2001)

# - The birds were sighted at c. 600 m in a coffee estate at the foothills of the range

§ - Not found in sholas, likely to be a *Cyornis rubricapilla* or a female *Cyornis pallipes* which are very similar

**Status symbols**

- A - Abundant
- B - Breeding confirmed
- POB - Breeding possible
- PRB - Breeding probable
- C - Common
- UC - Uncommon
- R - Rare
- W - Winter visitor
- ? - Status equivocal/unknown

Sálím Ali (1942-43) refers to the 67 species observed and collected by Sálím Ali on a six-day visit in January 1940 to Kemmangundi in course of his Mysore survey.

Shyamal (1993) is the checklist of 31 species, seen by L. Shyamal on a two-day visit in February 1993.

Thejaswi (2002) is the checklist of 97 species seen during my seven-day visit in May 2002.

